REMARKS

Claims 1-8 and 25-44 are now pending in the application (claims 9-24 are canceled by the present amendment and new claims 25-44 are added). No new matter has been added.

Amendment of the specification

The Examiner has asked that the priority claim appearing on page 1, beginning at line 9, be amended to reflect the status of the parent application (U.S.S.N. 09/025,178; Office action at page 2, ¶ 2). The parent application has been abandoned, and this information now appears in the priority claim.

The specification has also been amended as described in the Office action at page 3, ¶¶ 4-6).

Formal Drawings

In response to the Notice of Draftsperson's Patent Drawing Revie (PTO-948), the TRANSMITTAL OF FORMAL DRAWINGS and Formal Drawings are being filed concurrently. Entry of the Formal Drawings is respectfully requested.

35 U.S.C. § 102(b)

Claims 1-24 are rejected as being anticipated by Suzue *et al.* (*J. Immunol.* 156:873-879, 1996; herein, "Suzue") as evidenced by Srivastava *et al.* (*Curr. Opin. Immunol.* 6:728-732, 1994; herein, "Srivastava"). In view of the present amendment, Applicant respectfully requests reconsideration and withdrawal of this ground for rejection.

As the Examiner knows, the test for anticipation is one of identity. The prior art cannot anticipate a method that is later claimed, unless the prior art method includes all of the limitations of the method claimed. In the present case, claim 1, from which the remaining pending claims either depend or ultimately depend, has been amended to require that the complex include a moiety of interest covalently linked to "a protein consisting of *a portion of* a heat shock protein." Neither Suzue nor Srivastava disclose such a complex.

Claims 1-24 were also rejected as being anticipated by Barrios *et al.* (*Eur. J. Immunol.* 22:1365-1372, 1992; herein, "Barrios") as evidenced by Srivastava. This rejection should be withdrawn for the same reason provided above: Barrios does not disclose a method using the

complex Applicant now claims. Without an identical disclosure, there can be no anticipation. Accordingly, in view of the present amendment, the Examiner is asked to withdraw this ground for rejection.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in conditions for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

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Dated: July 28, 2003

MARKED UP VERSION OF AMENDMENTS
Specification Amendments Under 37 C.F.R. § 1.121(b)(1)(iii)

Replace the following paragraphs with the below paragraphs marked up by way of bracketing and bracketing to show the changes relative to the previous version of the paragraph:

Please replace the paragraph at page 1, lines 9 through 15, with the following:

This application is a continuation of U.S. Application No. 09/025,178, filed February 18, 1998 (now abandoned), which claims the benefit of U.S. Provisional Application No. 60/038,059, filed February 18, 1997 and U.S. Provisional Application No. 60/066,288, filed November 25, 1997, the contents of which are incorporated herein by reference in their entirety.

Please replace the paragraph at page 19, lines 2 through 17, with the following:

Spleens were removed from mice 10 days after the last injection. The spleens from 3-10 mice in each treatment group were pooled. Single-cell suspensions were prepared by grinding tissue through a sterile nylon mesh. Erythrocytes were removed by suspending the cells in pH 7.2 lysis buffer (0.15 M NH_4Cl, 1 M $KHCO_3$, 0.1 mM Na_2EDTA) and rinsing the cells two times with RPMI 1640 [media] medium. Splenocytes were then cultured at 1 x 10^7 cells/ml in 96-well round bottom microculture plates in RPMI 1640, supplemented with 10% FCS and 50 μM 2-ME at 37°C in 5% [CO^2] CO_2. The cells were stimulated with recombinant ovalbumin (10 μg/ml), SIINFEKL peptide (SEQ ID NO: 1) (10 μg/ml) or with Con A (5 μg/ml). Cell culture supernatants were removed at 72 h. A sandwich ELISA using paired monoclonal antibodies (Endogen, Cambridge, MA) was used to measure IFN-γ.

Please replace the paragraph at page 19, lines 19 through 26, with the following:

Single-cell suspensions of splenocytes were prepared as above. 25 x 10^6 splenocytes were cultured with 5 x 10^6 irradiated (15,000 rads) E.G7-OVA cells in RPMI 1640

supplemented with 10% FCS, 50 μM 2-ME, 1 mM sodium pyruvate and 100 μM non-essential amino acids. After 6-7 days in culture, splenocytes were purified by [Ficoll-Paque] FICOLL-PAQUE (Pharmacia, Piscataway, NJ) density centrifugation and then utilized as effector cells.

Please replace the paragraph at page 22, lines 13 through 34, through page 23, lines 1-12, with the following:

Whether mice injected with soluble protein without adjuvant could be primed to produce anti-ovalbumin T cells was investigated (Figure 1A). C57BL/6 mice were inoculated i.p. with 120 pmoles of ovalbumin (ova) or with 120 pmoles of ovalbumin-hsp70 fusion protein (ova-hsp70) in PBS. A second equivalent dose was given s.c. at two weeks. A third group of mice was injected with 120 pmoles of ovalbumin-p24 gag fusion protein (ova-p24), purified as described in Suzue and Young [(Suzue, K. & Young, R.A.,] *J. Immunol. 156*:873-879 (1996)), in order to examine the immune responses elicited by administering ovalbumin covalently linked to a protein other than hsp70, in the absence of adjuvant. Splenocytes of immunized mice were removed ten days after the s.c. immunization and for each mouse group, 5-10 spleens were pooled and splenocytes from immunized mice were cultured *in vitro* for 6 days with irradiated E.G7-OVA cells (syngeneic EL4 cells transfected with ovalbumin) without added interleukins (Moore, M.W. *et al.*, *Cell*, *54*:777-785 (1988)). The cultured cells were then used as effector cells in CTL assays. Cells from mice injected with ovalbumin protein or with ovalbumin-p24 fusion protein were unable to lyse T2-K^b target cells or T2-K^b cells pulsed with SIINFEKL peptide (SEQ ID NO: 1). In contrast, effector cells from mice primed with ovalbumin-hsp70 fusion protein were able to lyse T2-K^b cells pulsed with SIINFEKL peptide (SEQ ID NO: 1). See Figure 1A, [wherein] where the splenocyte cultures derived from mice immunized with ova ▫, ova-p24 ▽ and ova-hsp70 ■, which were used as effector cells in a standard cytotoxicity assay, [is] are shown. [The following] ^{51}Cr-labeled target cells were used: T2-K^b cells (--) and T2-K^b pulsed with SIINFEKL peptide (SEQ ID NO: 1) (—) at 300 μg/ml.

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

1. (Amended) A method of delivering a moiety of interest into a cell, the method comprising contacting the cell with a complex comprising the moiety of interest covalently linked to a protein consisting of a portion of a heat shock protein (hsp), wherein the cell is contacted under conditions appropriate for entry of the complex into the cell and the portion of the hsp is sufficient to deliver the moiety into the cell.

2. (Amended) The method [Claim]of claim 1, wherein the heat shock protein is [selected from the group consisting of:] a mycobacterial heat shock [proteins] protein[, human heat shock proteins, yeast heat shock proteins, bacterial heat shock proteins, nonhuman mammalian heat shock proteins, insect heat shock proteins and fungal heat shock proteins].

3. (Amended) The method of [Claim] claim 2, wherein the heat shock protein is a mycobacterial hsp70 [heat shock protein selected from the group consisting of: hsp65, hsp70, hsp60, hsp71, hsp90, hsp100, hsp10-12, hsp20-30, hsp40 and hsp100-200].

4. (Amended) The method of [Claim 3] claim 1, wherein the moiety is [selected from the group consisting of: proteins, peptides, lipids, carbohydrates, glycoproteins and small organic molecules] a protein or a peptide.

5. (Amended) [A] The method of [delivering a moiety of interest into] claim 1, wherein the cell is an antigen presenting cell [comprising contacting the cell with a complex comprising the moiety of interest covalently linked to a heat shock protein, under conditions appropriate for entry of the complex into the cell].

6. (Amended) The method of [Claim 5] claim 1, wherein the heat shock protein is [selected from the group consisting of: mycobacterial heat shock proteins, human heat shock proteins,] a yeast heat shock [proteins] protein, a bacterial heat shock [proteins] protein,

[nonhuman] a mammalian heat shock [proteins] protein, an insect heat shock [proteins and] protein, or a fungal heat shock [proteins] protein.

7. (Amended) The method of [Claim 6] claim 2, wherein the heat shock protein is [a mycobacterial heat shock protein selected from the group consisting of:] an hsp65, [hsp70,] hsp60, hsp71, hsp90, hsp100, hsp10-12, hsp20-30, hsp40 [and] or hsp100-200.

8. (Amended) The method of [Claim 7] claim 4, wherein the [moiety is selected from the group consisting of: proteins, peptides, lipids, carbohydrates, glycoproteins and small organic molecules] protein or peptide is glycosylated.